CEREAL RUST BULLETIN

Report No. 3
May 9, 2014

Issued by:

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Or, send an email to: Mark.Hughes@ars.usda.gov

Reports from this list as well as all Cereal Rust Bulletins are maintained on the CDL website (*http://www.ars.usda.gov/mwa/cdl*)

- Wheat leaf rust was severe in plots of Saluda in eastern North Carolina.
- Wheat leaf rust at high severity was found in a few fields in South Texas and plots in southeastern Louisiana.
- A single hot spot of wheat stripe rust was found in a plot in eastern Arkansas.
- Oat stem rust was found in plots in central Texas and southeastern Louisiana.
- Oat crown rust was found in fields in Texas and north central Florida.

For original, detailed reports from our cooperators and CDL staff, please visit the Cereal Rust Situation (CRS) reports page on the CDL website or click the CRS links found throughout the bulletin. The cereal rust observation maps (Maps) can also be found on the CDL website.

Ongoing drought conditions continue to be an issue in many areas of the central and southern plains (see Drought Monitor). Unfavorable weather has delayed small grain planting in the northern plains. In the Pacific Northwest small grain development is somewhat ahead of the 10-year averages.

The winter wheat crop was 29% heading by May 4, six points behind the 5-year average. Winter wheat conditions continued to decline in the southern plains due to freeze and drought damage. Winter wheat harvest has begun in the Coastal Bend area of Texas and in areas in southern Georgia. By May 4, twenty six percent of the spring wheat crop was planted, 15 points behind the 5-year average.

By May 4, forty percent of the spring oat crop was sown, 31 points behind the 5-year average. The spring barley crop was 46% planted, two points ahead of the 5-year average.

Wheat stem rust.

There have been no new wheat stem rust reports since the last bulletin. Previously, wheat stem rust was found in sentinel plots at Weslaco in the Rio Grande Valley, Texas (see CRB #2).

Wheat leaf rust.

South Texas and southeastern Louisiana – A rust survey covering the southern half of Texas to Baton Rogue in southeastern Louisiana was conducted between April 30 and May 5. Winter wheat fields visited along a west to east transect extending from Uvalde, Texas to Baton Rouge, Louisiana varied from milk to soft dough stage. Of the eleven fields visited leaf rust was found in all but one. Most of leaf rust samples had low severities (10-20%) and were taken from the edges of otherwise disease free fields. However, in the case of samples obtained from Zavala and Bastrop counties in Texas, disease severity (50-80%) and prevalence (100%) were quite high. A third sample with high severity (70%) came from a Louisiana State University winter wheat variety trial field at the Ben Hur Research Farm in Baton Rouge. The sample was obtained from susceptible line USG 3404 and was not in an inoculated nursery plot.

Previously, in a survey of north central Texas in late March and early April no rust was found in commercial fields and consultants and extension agents in the areas did not see rust. Typically, wheat leaf rust is found by this time in north central Texas.

Oklahoma – Low levels of leaf rust were found in an irrigated no-till wheat field in central Oklahoma (Caddo County) in early May. This was the first wheat leaf rust report from the state other than a single wheat leaf rust pustule observed in late March. Drought conditions in the state coupled with high temperatures and wind have not been conducive for wheat or rust development. Wheat in north central Oklahoma is at the beginning of flowering.

Kansas – Wheat leaf rust had not been reported in the state by the end of April. The risk of a severe leaf rust outbreak in the state is low. Despite some recent rains drought conditions persist in most of the state. Winter wheat was 78% jointed and 15% headed by May 4, well behind the 5-year averages.

Louisiana – There have been no new reports from the state since the last bulletin. Previously, very little leaf rust was reported in the state. By May 4, 93% of the winter wheat had headed with 19% turning.

Mississippi – Trace levels of wheat leaf rust were reported in Greenwood in the eastern Delta region in late April.

Georgia – There have been no new rust reports from Georgia. Previously, wheat leaf rust was reported in a very early-planted nursery at Plains in southwestern Georgia (see CRB #1).

Arkansas – Other than leaf rust reported on volunteer wheat at the experiment station at Marianna in the eastern part of the state on March 20, there have been no reports of leaf rust in the state. By May 4, 49% of the winter wheat crop in the state had headed compared to the 5-year average of 88%. Recently, it has been hot, dry and windy in the state.

North Carolina – Leaf rust was severe in plots of Saluda at Kinston in eastern North Carolina on May 5. Leaf rust was also found in other plots, but at low to moderate levels. Further leaf rust development in the plots is expected with the warming temperatures.

Wheat leaf rust map. *Please visit:* http://www.ars.usda.gov/Main/docs.htm?docid=9757.

Wheat cultivar *Lr* gene postulation database. *Please visit*: Leaf rust resistance gene postulation in current U.S. wheat cultivars.

Wheat stripe rust.

Louisiana – There have been no new reports from the state since the last bulletin. Previously, traces of stripe rust were reported around the state by early April (see CRB #2).

Mississippi – A few stripe rust infected leaves were found on volunteer plants under a rainout shelter in Stoneville in the Delta region. Most of the stripe rust had formed telia due to the warmer temperatures. As of May 3, stripe rust had not been confirmed in commercial fields or nurseries anywhere in the state.

Arkansas – A small wheat stripe rust hot spot was found in a plot of a known susceptible cultivar at Marianna in eastern Arkansas on April 30. This was the first report of stripe rust in the state this season.

Oregon – Stripe rust was reported in a commercial field near Adams City in north central Oregon on April 24. Previously, wheat stripe rust was reported in early April in the Willamette Valley, where it appeared to overwinter.

Washington – Stripe rust was found on a solitary lower leaf of a susceptible check in a nursery at Walla Walla in southeastern Washington on April 23. On revisiting a field in Grant County in east central Washington, which was heavily infected with stripe rust in November 2013, no stripe rust could be found in late April. Generally, stripe rust disease pressure was low in eastern Washington in late April.

As is typical, stripe rust severities up to 30% were observed on susceptible cultivars in nurseries at Mount Vernon in northwestern Washington the first week of April.

Please send wheat and barley stripe rust collections as soon as possible after collection to:

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***Note**:* Stripe rust collections are vulnerable to heat and do not survive long at warm temperatures; therefore, if shipment of collections for race identification is delayed their viability will be greatly reduced. An overnight courier service is preferred for sending stripe rust collections.

Wheat stripe rust map. *Please visit:* http://www.ars.usda.gov/Main/docs.htm?docid=9757.

Oat stem rust. Oat stem rust (negligible prevalence, 5-10% severity) was found in an edge of a field in Bastrop County in central Texas and in a nursery in Baton Rogue in southeastern Louisiana in early May. Oat was at milk stage in both locations. Previously, trace levels of oat stem rust were found on Harrison in plots at Castroville in south central Texas in early April.

Oat crown rust.

South Texas – Oat crown rust (5% prevalence, 5-10% severity) was found in the same Bastrop County field as the oat stem rust in early May. Previously, oat crown rust was spreading uniformly throughout the nursery at Wharton and increasing on Nora at Beeville, but had not yet been found at College Station.

Florida – Oat crown rust was found on the cultivar Horizon 201 in Trenton and Hague in north central Florida.

Oat crown rust map. *Please visit:* http://www.ars.usda.gov/Main/docs.htm?docid=9757.

Barley stem rust. Not yet reported in the U.S. this year.

Barley leaf rust. There have been no new barley leaf rust reports. Previously, low levels of barley leaf rust were found on the lower leaves of the winter barley Alba in plots at Mount Vernon in northwestern Washington on March 25.

Barley leaf rust map. *Please visit:* http://www.ars.usda.gov/Main/docs.htm?docid=9757.